



materials



an Open Access Journal by MDPI

Advances in Semiconductor / Electrolyte Interfaces Research

Guest Editor:

**Dr. Elena Alexandrovna
Filonova**

Department of Physical and
Inorganic Chemistry, Ural Federal
University, Yekaterinburg, Russia

Deadline for manuscript
submissions:

closed (10 July 2023)

Message from the Guest Editor

The growing demands for green and sustainable energy have resulted in numerous worldwide investigations of design, validation, and characterization of effective energy storage and energy conversion devices. A deeper understanding of processes occurring at interfaces between constructional parts of the electrochemical devices, such as chemical reactions and a charge transfer, can be a critical point determining an overall cell performance and durability, hampering an acceleration of new devices implementation.

This Special Issue will address current findings and novel insights in observation and characterization of all types of the physical and chemical processes and emergent properties, occurring at the semiconductor/electrolyte interfaces in electrochemical devices. Articles and reviews, regarding studies of the structure and peculiar properties of heterogeneous interfaces in solid oxide fuel cells, solid oxide electrolysis cells, solid oxide reversible cells, and solid state batteries by means of X-Ray diffraction, X-Ray Photoelectron Spectroscopy, Scanning Electron Microscopy, Transmission Electron Microscopy, and Electrochemical Impedance Spectroscopy, are greatly welcome.



mdpi.com/si/111506

Special issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank: JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)